APPROACHES TO RURAL HEALTH IN NEPAL
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OUTLINE OF PRESENTATION

- Overview of Health Situation in Nepal
- Literature Review
- You and Your Family’s Health Survey Project
- Birth Decisions and Health Knowledge: A Probit Regression
- Conclusion
The research for this thesis focuses on exploring different methods of improving rural health for women in Nepal and it investigates what would be a feasible way of implementing those ideas at Dhulikhel Hospital.
STATUS OF HEALTH IN RURAL NEPAL
ISSUES WITH RURAL HEALTH

Troubles with Heath Care Access Include:
- Mountainous terrain
- Affording treatment
- Gender equality
- Government instability

Women’s Health
- High rates of maternal mortality
- Education -> Health Care
- Uterine Prolapse
LITERATURE REVIEW

Worldwide Approaches to Rural Health
Women, and her other adults in her family, in Bangladesh who participated in a credit program were found to have increased usage of formal health care services. Nanda (1999)

Having access to medical care is a determinate of health and well being. Best when the staff is ‘professional’. Banerjee (2004)

It was found that when grants were given to “ultra poor” in rural Bangladesh, that the usage of ‘self-care’ of illnesses decreased and participants were more willing to spend money on allopathic care. Ahmed (2006)

Amongst people that had health care insurance in the Philippines, they were more physicians present at births. Dror (2005)
Key Factors (+)
- Affordable Premium
- Trust
- Distance

Key Factors (-)
- Long waiting times
- Too many prescriptions
- Unequal treatment
KISIIZI HOSPITAL, UGANDA
Founded in 1958
Mission Hospital sponsored by the Church of Uganda and other international organizations
Started with 24 beds
Programs they now run:
  ▪ School of Nursing
  ▪ Primary School
  ▪ Hydroelectric Power Company
  ▪ Micro-Health Insurance
Micro Health Insurance

- Started in 1996
- Serves 12 different clinics
- It costs around US$ 35 per year per family (4 person)
- Covers:
  - Inpatient and outpatient services including: VCT, PMTCT, X-ray, Immunization, Nutrition programs, ART for HIV/AIDS
  - Coverage can vary based upon public health criteria determined by the doctors
- Only when 60% of the community (Engozo) subscribe, will the health insurance be offered
Growth attributed to:

- Community’s confidence in the scheme
- Scaled-up marketing through:
  - Involving opinion and community leaders
  - Satisfied users (scheme members)
- Promotion of behaviour change through integration of preventative health & insurance covers
- Introduction of annual premium allowing households and groups a long time to save
- Good quality health facility (Kisiizi Hospital)
- Onsite Client service terminal
THE MHI PLAN NOW COVERS 37,000 INDIVIDUALS.

That makes it the largest MHI scheme in Uganda.
You and Your Family’s Health Survey Project
MOTIVATION

- Dhulikhel Hospital
  - Micro Finance Program
- Create a Health Insurance Program
  - Determine the Willingness to Pay
PHASE 1:

- **Baseline Statistics and Hypothesis (Pilot Survey)**
  - Collect Baseline Statistics
  - Dichotomous Contingency Experiment
  - **Research Questions**
    - 1: Estimate the willingness to pay for micro health insurance.
    - 2: Examining family’s health care treatment practices to determine if there is a gender gap for treatment.
  - **Potential Outcome:**
    - Dhulikhel Hospital will create a pilot program for micro health insurance based upon the preliminary analysis of Phase 1.
  - **Timeline:** January-February 2013
Follow Up Survey (Before Program Survey)
- A formal choice experiment
- Sample Size: 800
- The effect of health care insurance on health seeking behavior with regards to the gender gap and overall well-being will be analyzed.
- Timeline: Summer 2013
**Formal & Rigorous Assessment of Micro Health Insurance as a Treatment on Health Usage, Health Well Being and the Gender Gap (After Program Survey)**

- Conducted after the micro health insurance program has been implemented with the same 800 households.
- The treatment effect of micro health insurance on access, attitude, the gender gap and well being will be tested amongst those who did and did not have micro health insurance.
- The survey will be implemented in other Dhulikhel clinics.
- Timeline: TBD
BIRTH DECISIONS AND
HEALTH KNOWLEDGE

A Probit Regression
Where did you give birth?

- 62% Home
- 38% Elsewhere

Home

Elsewhere
In the Makwanpur district of Nepal, women who received health education had lower rates of maternal mortality and neonatal mortality. Manandhar et al. (2004)

In an Australian study, they found one of the most important goals to be accomplished in maternity classes is giving the women the confidence to make good decisions on their own. Renkert and Nutbeam (2001)

A study of Afghan woman found that even though 79% of women had an average of 3.7 antenatal visits, 67% of women gave birth at home. van Egmond et al. (2004)
NLSS III DATA

- Sponsored by Government of Nepal and World Bank
- Third survey of its kind
- Consists of both household and community level data. Has cross section and panel data.
- A total of 5,988 households for a total of 28,670 individuals were surveyed
- Only around 1,000 observations were used in this regression
Hypothesis 1: When a woman has a health worker visit her house, she will be less likely to give birth at home.

Hypothesis 2: When a woman has a pre-natal visit, she will be less likely to give birth at home.
**PROBIT MODEL**

\[
HOMEBIRTH_i^* = b_0 + b_1 \text{HWVISIT}_i + b_2 \text{PRENATALV}_i + b_3 Z_i + u_i
\]

- **HOMEBIRTH** is the latent probability of a woman giving birth at home
  - Where if \(HOMEBIRTH^* \geq 0\) then \(HOMEBIRTH = 1\)
  - And if \(HOMEBIRTH^* < 0\) then \(HOMEBIRTH = 0\)
RESULTS
Statistically significant:
Father’s education (-)
Prenatal Visit (-)
Wealth (-)
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Household Size (+)
Lower Caste (+)
Mountain and Hill (+)
Average Predicted Probability of Giving Birth at Home

Legend
- Health Centers

Per District Probability
- No Data
- 0.000000 - 0.338750
- 0.338751 - 0.541962
- 0.541963 - 0.612531
- 0.612532 - 0.661011
- 0.661012 - 0.692924
- 0.692925 - 0.729324
- 0.729325 - 0.772426
- 0.772427 - 0.834891
- 0.834892 - 0.901800
- 0.901801 - 0.992979

PREDICTED PROBABILITY OF GIVING BIRTH AT HOME
Proportion of Health Worker Visits Per District

Legend
- Health Centers

District Proportion with Visit
- No Data
- 0.000000 - 0.024194
- 0.024195 - 0.055556
- 0.055557 - 0.086275
- 0.086276 - 0.122449
- 0.122450 - 0.166667
- 0.166668 - 0.214286
- 0.214287 - 0.257143
- 0.257144 - 0.321429
- 0.321430 - 0.437500
- 0.437501 - 0.666667

Kilometers
0 40 80 160 240 320
Location of the Poorest People Based on Percentage

Legend
- Health Centers
Per District Percentage
- No Data
15.504683 - 35.215054
35.215055 - 59.680284
59.680285 - 69.448183
69.448184 - 75.000000
75.000001 - 80.654339
80.654340 - 84.027778
84.027779 - 88.383838
88.383839 - 91.970803
91.970804 - 96.721311
96.721312 - 100.000000

0 35 70 140 210 280 Kilometers
Hypothesis 1: When a woman has a health worker visit her house, she will be less likely to give birth at home.
- False. Issues with variable.

Hypothesis 2: When a woman has a pre-natal visit, she will be less likely to give birth at home.
- True. Although issue of endogeneity.

Future work
- Correct issue of heteroskedasticity
- Correct issue of endogeneity
RECOMMENDATIONS

- Small tailored programs.
  - Well suited to situation
- Large program
  - Well funded
- A mix of the two
- Include the locals in creation and decision making
- Remember the diversity
- If practical, follow goals set by Government
FUTURE WORK

- Continue survey project
  - 5 year longitudinal survey
- Update probit model
  - Implement similar model with HDS data
- Continue investigating issues with maternal and child health in the developing world
Works Cited:


Hospital, Kisiizi. "Kisiizi Hospital Health Insurance Scheme." 2012.


